

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:  
SEAN W. O'BRIEN  
INTELLECTUAL PROPERTY DEPARTMENT  
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## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing (day/month/year) <b>14 JAN 2005</b>	
<b>FOR FURTHER ACTION</b> See paragraph 2 below	
Applicant's or agent's file reference OT-5020A	
International application No. PCT/US04/12420	International filing date (day/month/year) 22 April 2004 (22.04.2004)
Priority date (day/month/year) 22 April 2003 (22.04.2003)	
International Patent Classification (IPC) or both national classification and IPC IPC(7): B66B 11/08, 7/10 and US Cl.: 187/264, 266, 412	
Applicant OTIS ELEVATOR COMPANY	

1. This opinion contains indications relating to the following items:

- ☒ Box No. I      Basis of the opinion
- ☐ Box No. II      Priority
- ☐ Box No. III      Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV      Lack of unity of invention
- ☒ Box No. V      Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI      Certain documents cited
- ☐ Box No. VII      Certain defects in the international application
- ☐ Box No. VIII      Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Eileen D. Lillis Telephone No. 703-308-1113
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Form PCT/ISA/237 (cover sheet) (January 2004)

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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US04/12420

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/US04/12420

**Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)

Claims NONE YES

Claims 1-10 NO

Inventive step (IS)

Claims NONE YES

Claims 1-10 NO

Industrial applicability (IA)

Claims 1-10 YES

Claims NONE NO

2. Citations and explanations:

Claims 1-10 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest an elevator system having a plurality of cab-supported sheaves moving with the cab, a first hoistway sheave located near a first end of the hoistway, a second hoistway sheave located near a second end of the hoistway, a load bearing member is redirected around the respective sheaves providing a unique roping for the elevator system, and a tension device that maintains tension in the load bearing.

Salmon 5,526,901 is considered to be the closest prior art. Salmon discloses an elevator system having a plurality of cab-supported sheaves (36, 48) moving with the cab, a first hoistway sheave (26) located near a first end of the hoistway, a second hoistway sheave (44) located near a second end of the hoistway. Salmon does not disclose a load bearing which extends and engages all the sheaves in the elevator system.

Bianca 3,101,130 discloses a similar elevator roping system as respective claims 1 and 7. However, Bianca lacks showing, at least the load bearing member is redirected second time around by one of the cab-support sheaves, and a tension device.

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